

Sub  
A1

maintain a global editing timestamp that is updated with each editing operation

establish an interval list for each node in a compositing tree defining a movie, each node having a range of possible times, an interval list for a node defining, for each possible time in the range, a single editing timestamp corresponding to the possible time;

use the interval list to evaluate the validity of a cached frame for a particular frame time period, the cached frame having been produced by compositing a first node in the compositing tree, the evaluation being performed by (a) comparing (i) an editing timestamp associated with the cached frame with (ii) the timestamps of all intervals in the interval list that overlap the frame time period, and (b) treating the cached frame as invalid if any of the intervals' timestamps is later than the timestamp of the cached frame.

3. The product of claim 1, wherein:

4. The product of claim 3, wherein:

2 the series of (time, timestamp) pairs is sorted in time ascending order.

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